REMARKS

This is in response to the Office Action dated August 28, 2003. Claims 19-35 and 47-54 have been canceled, without prejudice in view of Restriction/Election Requirements. Claims 4 and 40 have also been canceled. New claims 55-59 have been added. Thus, claims 1-3, 5-18, 36-39, 41-46 and 55-59 are now pending.

Claim 1

Claim 1 stands rejected under 35 U.S.C. Section 103(a) as being allegedly unpatentable over Veerasamy in view of Admitted Prior Art (APA), or alternatively the APA in view of Veerasamy. This Section 103(a) rejection is respectfully traversed for at least the following reasons.

Claim 1 requires "forming a layer comprising diamond-like carbon (DLC) on the glass substrate; forming a protective layer on the glass substrate over the layer comprising DLC; sputtering a solar control multi-layer coating onto another surface of the glass substrate so that the solar control coating and the layer comprising DLC are formed on opposite sides of the glass substrate; heat treating the glass substrate with each of the solar control multi-layer coating, the layer comprising DLC and the protective layer thereon so that during the heat treating the protective layer prevents significant burnoff of the layer comprising DLC, wherein the heat treating comprises heating the glass substrate to temperature(s) sufficient for thermal tempering." For example, and without limitation, see Fig. 1 of the instant application which illustrates that the solar control coating (e.g., low-E coating) 9 is provided on one side of the glass substrate 1,

and the DLC 11 and protective layer 17 therefor are provided on the *opposite side* of the glass substrate. Providing the DLC/protective layer and the solar control coating on *opposite sides* of the glass substrate is highly advantageous in that the solar control coating is protected by the glass substrates in the interior of the IG unit so that it can perform its solar control function in an efficient manner. Meanwhile, the DLC is provided on an exterior side of the substrate so as to protect the same from exterior scratching and/or the like.

The cited art fails to disclose or suggest the aforesaid aspect of claim 1. In particular, the cited art fails to disclose or suggest providing the DLC and the solar control coating on *opposite sides* of the glass substrate. Thus, even the alleged combination of Veerasamy and the APA (which applicant believes would be incorrect in any event) fails to meet the invention of claim 1. Moreover, *Veerasamy teaches directly away from the invention of claim 1, because Veerasamy in Fig. 3 teaches that that DLC and the solar control coating are on the same side of the substrate.* There is absolutely nothing in the art of record which discloses or suggests DLC and a solar control coating on opposites sides of a substrate as required by claim 1.

The cited Hartig references does not even disclose or suggest a DLC inclusive layer; let alone DLC and a solar control coating on opposite sides of a substrate as required by claim 1. Moreover, since Veerasamy clearly teaches in Fig. 3 that the DLC and solar control coating are on the same side of the substrate, there is clearly no suggestion in the art for providing them on opposite sides of the substrate as required by

claim 1 – the art teaches directly to the contrary. One combining Veerasamy and Hartig (which applicant believes would be incorrect in any event) would have provided the DLC and solar control coating on the same side of the substrate as taught by Veerasamy – not on opposite sides of the substrate as required by claim 1.

In view of the above, the rejection of claim 1 should be withdrawn.

Other Claims

Claims 9 and 42 require that the protective layer comprises at least one carbide. The cited art fails to disclose or suggest this aspect of claims 9 and 42. There is absolutely no suggestion in the cited art for a carbide in such as protective layer. Ebisawa also fails to disclose or suggest such a material for protecting DLC during heat treatment.

Claim 11 requires that "the protective layer comprises at least one of: BC_x (boron carbide) where x is from 0.75 to 1.5, TiC_x (titanium carbide) where x is from 0.47 to 0.99, HfC_x (hafnium carbide) where x is from 0.47 to 0.99, titanium hafnium carbide, TaC_x (tantalum carbide) where x is from 0.47 to 0.99, and ZrC_x (zirconium carbide) where x is from 0.47 to 0.99." Again, the cited art fails to disclose or suggest this aspect of claim 11.

Claim 36 also requires that the solar control coating and DLC be provided on opposite sides of the substrate. The cited art fails to disclose or suggest this aspect of claim 36.

Claims 55-59 require that the protective layer comprise at least some Zr (zirconium). Surprisingly, this has been found to be highly advantageous in that Zr in many instances need not be "removed" from the coated article following heat treatment (whereas the tungsten disulfide in Veerasamy does). Accordingly, it has been found that the use of Zr provides for unexpected results in this regard. Moreover, the art clearly fails to disclose or suggest the use of any Zr in a DLC protective coating/layer. Thus, claims 55-59 clearly define over the cited art.

Conclusion

For at least the foregoing reasons, it is respectfully requested that all rejections be withdrawn. All claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

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